

**MULTIPLE ANTIGENIC PEPTIDES IMMUNOGENIC AGAINST
*STREPTOCOCCUS PNEUMONIAE***

ABSTRACT OF THE DISCLOSURE

The invention provides a nucleic acid encoding the 37-kDa
5 pneumococcal surface adhesion A protein (PsaA) from *Streptococcus
pneumoniae*. Also provided are isolated nucleic acids comprising a unique
fragment of at least 10 nucleotides of the 37-kDa protein. The invention also
provides purified polypeptides encoded by the nucleic acid encoding the 37-
kDa protein from and the nucleic acids comprising unique fragment of at least
10 10 nucleotides of the 37-kDa protein. The invention further provides
monoclonal antibodies which selectively bind PsaA. In addition, peptides are
provided that immunospecifically bind to the monoclonal antibodies of the
invention, and that are immunogenic against *Streptococcus pneumoniae*
infection. Additionally, multiple antigenic peptides that provide protection
15 against *S. pneumoniae* challenge are provided. These multiple antigen
peptides comprise the peptides that immunospecifically bind to the
monoclonal antibodies. Also provided are vaccines comprising such
immunogenic peptides, and methods of conferring protective immunity
against *Streptococcus pneumoniae* infection by administering therapeutic
20 composition comprising the immunogenic peptides of the invention. Also
provided are methods of detecting the presence of *Streptococcus
pneumoniae* in a sample using antibodies or antigens and methods of
preventing and treating *Streptococcus pneumoniae* infection in a subject. In
addition, a method of identifying the sequence of a peptide potentially
25 capable of eliciting protective immunity against a pathogenic microorganism is
provided.